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1. A data structure for analyzing data in a computer-implemented data mining system, wherein the data structure is a data model that comprises a Gaussian Mixture Model that stores transactional data, and the data model is mapped to aggregate the transactional data for cluster analysis.

- 2. The data structure of claim 1, wherein the data model includes a basket table that contains summary information about the transactional data, an item table that contains information about individual items referenced in the transactional data, and a department table that contains aggregate information about the transactional data.
- 3. The data structure of claim 1, wherein the cluster analysis groups the transactional data into coherent groups according to perceived similarities in the transactional data.
- 4. The data structure of claim 1, wherein the data model is stored in a relational database managed by a relational database management system.
- 5. The data structure of claim 1, wherein the data model is accessed from a relational database managed by a relational database management system.
- 6. The data structure of claim 1, wherein the data model is mapped into a single flat table format to produce a correct level of aggregation for statistical analysis.
- 7. The data structure of claim 1, wherein the data model is mapped into a database view to produce a correct level of aggregation for statistical analysis.
 - 8. The data structure of claim 1, wherein the data model is comprised of one row per transaction in the transactional data.

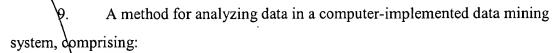
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generating a data structure in the computer-implemented data mining system, wherein the data structure is a data model that comprises a Gaussian Mixture Model that stores transactional data; and

mapping the data model to aggregate the transactional data for cluster analysis.

- 10. The method of claim 9, wherein the data model includes a basket table that contains summary information about the transactional data, an item table that contains information about individual items referenced in the transactional data, and a department table that contains aggregate information about the transactional data.
- 11. The method of claim 9, wherein the cluster analysis groups the transactional data into coherent groups according to perceived similarities in the transactional data.
- 12. The method of claim a wherein the data model is stored in a relational database managed by a relational database management system.
- 13. The method of claim 9, wherein the data model is accessed from a relational database managed by a relational database management system.
- 14. The method of claim 9, wherein the mapping step comprises mapping the data model into a single flat table format to produce a correct level of aggregation for statistical analysis.
- 15. The method of claim 9, wherein the mapping step comprises mapping the data model into a database view to produce a correct level of aggregation for statistical analysis.

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- 16. The method of claim 9, wherein the data model is comprised of one row per transaction in the transactional data.
- 7. An apparatus for analyzing data in a computer-implemented data mining system, comprising:

means for generating a data structure in the computer-implemented data mining system, wherein the data structure is a data model that comprises a Gaussian Mixture Model that stores transactional data; and

means for mapping the data model to aggregate the transactional data for cluster analysis.

- 18. The apparatus of claim 17, wherein the data model includes a basket table that contains summary information about the transactional data, an item table that contains information about individual items referenced in the transactional data, and a department table that contains aggregate information about the transactional data.
- 19. The apparatus of claim 17, wherein the cluster analysis groups the transactional data into coherent groups according to perceived similarities in the transactional data.
- 20. The apparatus of claim 7, wherein the data model is stored in a relational database managed by a relational database management system.
- 21. The apparatus of claim 17, wherein the data model is accessed from a relational database managed by a relational database management system.
- 22. The apparatus of claim 17, wherein the means for mapping comprises means for mapping the data model into a single flat table format to produce a correct level of aggregation for statistical analysis.

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- 23. The apparatus of claim 17, wherein the means for mapping comprises means for mapping the data model into a database view to produce a correct level of aggregation for statistical analysis.
- 5 24. The apparatus of claim 17, wherein the data model is comprised of one row per transaction in the transactional data.